

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000927310001-8

APPROVED FOR RELEASE: 08/23/2000

REEL # 273  
KUKHA REVAM.  
to A.

SHCHUKAREV, S.A.; BALICHEVA, T.G.; EORCHA, K.Ya.; KUKHAREVA, M.A.

Infrared absorption spectra of anhydrous sulfuric and  
orthophosphoric acids. Vest. LGU 19 no.4:147-151 '64.

(MIRA 17:3)

KUKHAREVA, M.I., starshiy nauchnyy sotrudnik, kandidat meditsinskikh nauk

Organization and effectiveness of mass fluoridation and prevention  
of dental caries in younger school children in Odessa. Stomatolo-  
gia no.5:54-55 S-0 '54.  
(KLRA 7:11)

1. Is Odesskogo nauchno-issledovatel'skogo stomatologicheskogo  
instituta.

(DENTAL CARES, prevention and control,  
in Russia)

(FLUORIDATION,  
in Russia)

KUKHAREVA, M.I., starshiy nauchnyy sotrudnik

Detecting early forms of parodontitis in school children and  
treating them at preventive and therapeutic clinics. Stomatologiya  
35 no.5:7-9 S-O '56  
(MLRA 10:4)

1. Iz Odeaskogo nauchno-issledovatel'skogo stomatologicheskogo  
instituta.  
(GUMS--DISEASES).

BAKULEV, A.N.; MURAV'YEV, M.V.; KUKHAREVA, N.S. (Moskva V-49, Donskaya ul., d.44, kv.18)

Indications for surgical treatment of the defects of the inter-  
ventricular septum. Grud. khir. 6 no.6:10-16 N-D '64.

(MIRA 18:7)

1. Institut serdechno-sosudistoy khirurgii (direktor - prof. S.A. Kolesnikov) AMN SSSR i klinika fakultetskoy khirurgii imeni S.I. Spasokukotskogo (direktor - akademik A.N. Bakulev), Moskva.

KUKHAREVA-MEDVEDOVSKAYA, V. M. Cand Med Sci -- (diss) "Treatment  
of Cardiovascular Insufficiency With Corglycon." Dnepropetrovsk,  
1957. 14 pp 19 cm. (Min of Health Ukrainian SSR, Dnepropetrovsk  
Medical Inst), 200 copies (KL, 25-57, 118)

- 13 -

KUKHAREVICH, N.Ye.; PALSHKOVA, M.P.; KHARCHENKO, A.A.; GAPOCHKA,  
I.K., otv. red.; NIKOLAYEVA, T.A., red.

[We prepare ourselves to listen to lectures] Gotovimsia  
slushat' lektsii. Moskva, No.2. 1963. 100 p.  
(MIRA 18:3)

l. Moscow. Universitet druzhby narodov. Kafedra russkogo  
yazyka.

Country : USSR  
Category: Cultivated Plants. Grains.

M

Abs Jour: RZhBiol., No 22, 1958, No 100260

Author : Yarchuk, I. I.; Ronsal', G.A.; Kukharevskiy, G.V.  
Inst : Khar'kov University  
Title : Effectiveness of Humic Fertilizers Upon Application  
Under Corn in the South of Ukraine.

Orig Pub: V. sb.: Guminovyye udobreniya. Khar'kov, Khar'kovsk.  
un-t, 1957, 237-244

Abstract: Experiments were conducted on the chestnut and  
sandy soils in the south of Ukraine with the  
application in clusters under corn of humophos,  
humus and P<sub>c</sub>, peat, and granular commercial P<sub>c</sub>  
and N<sub>a</sub>. Application of organic-mineral humic

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M-38

Country : USSR  
Category: Cultivated Plants. Grains. CIA-RDP86-00513R000927310001-8

Abs Jour: RZhBiol., No 22, 1958, No 100260

fertilizers (humophos) is the most effective  
means of raising the corn yield in comparison  
with mineral fertilizers. With the application  
of humic fertilizers, not only the quantitative  
yield of corn is increased but its quality  
also changes in the direction of an increased  
yield of protein from 1 hectare, and of other  
valuable nutrients. Application of humic  
fertilizers reduces the gap between the blooming  
of the male and female flowers which  
is important for the normal pollination of the  
plants. -- Ye. I. Saks

Card : 2/2

KUKHAREVSKY, G.V.

MILLIONSHCHIKOV, M.D.; GVERITSITELI, I.G.; ABRAMOV, A.S.; GORLOV, L.V.;  
GUBANOV, Yu.D.; YAFREMOV, A.A.; ZHUKOV, V.F.; IVANOV, V.Ye.;  
KOYRZIN, V.K.; KONTELOV, Ye.A.; KOSOVSKIY, V.G.; KUKHARKIN,  
N.Ye.; KUCHEROV, R.Ya.; LALIKIN, S.P.; MERKIN, V.I.; NECHAYEV,  
Yu.A.; POZDNYAKOV, B.S.; PONOMAREV-STEPNOY, N.N.; SAMARIN, Ya.N.;  
SEROV, V.Ya.; USOV, V.A.; FEDIN, V.G.; YAKOVLEV, V.V.; YAKUTOVICH,  
M.V.; KHODAKOV, V.A.; KOMPANIETS, G.V.

High-temperature reactor-converter "Romashka." Atm. energ.  
17 no. 5:329-335 N '64. (MIRA 17:12)

L 18316-65 EWC(j)/EWT(1)/EWP(e)/EWC(k)/EAT(m)/EPP(s)/EPP(n)-2/EPR/~~EPP(d)~~-2/EWP(b)  
P-6/Pr-4/Po-4/Pu-1 IJP(o)/FWL/SSD WH/AS/NH  
ACCESSION NR: AF4049532 S/0089/64/017/005/0329/0335

AUTHOR: Millionshchikov, M. D.; Gverdtsiteli, I. G.; Abramov, A. S.; Gorlov, L. V.; Gubanov, Yu. D.; Yefremov, A. A.; Zhukov, V. F.; Ivanov, V. Ye.; Kovyrzin, V. K.; Koptelov, Ye. A.; Kosovskiy, V. G.; Kukharkin, N. Ye.; Kucherov, R. Ya.; Lalykin, S. P.; Merkin, V. I.; Nechayev, Yu. A.; Pozdnyakov, B. S.; Ponomarev-Stepnoy, N. N.; Samarin, Yu. N.; Serov, V. Ya.; Usov, V. A.; Fedin, V. G.; Yakovlev, V. V.; Yakutovich, M. V.; Khodikov, V. A.; Kompaniyets, G. V.

TITLE: The "Romashka" high-temperature reactor-converter /9

SOURCE: Atomnaya energiya, v. 17, no. 5, 1964, 329-335

TOPIC TAGS: nuclear power reactor, reactor feasibility study, research reactor, thermoelectric converter/Romashka

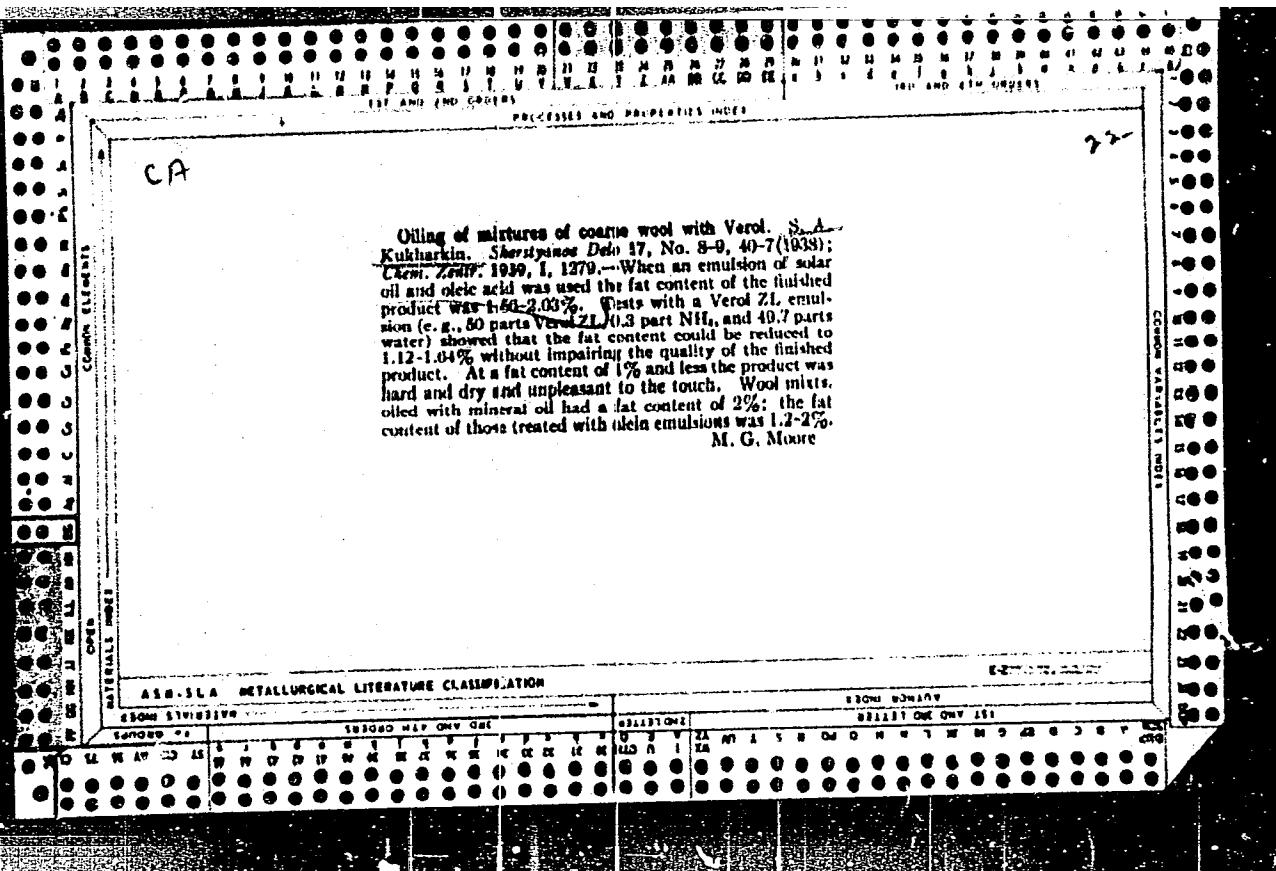
ABSTRACT: The authors briefly describe the construction, parameters, test results, and operating experience of the "Romashka" reactor-

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L 18316-65  
ACCESSION NR: AP4049532

converter unit, which has been in operation at the Kurchatov Atomic Energy Institute since August 1964. The fuel used is uranium dioxide enriched to 90% U<sup>235</sup>. Graphite and beryllium are used as reflectors. Electricity is generated by silicon-germanium semiconductor thermocouples distributed on the outer surface of the reactor and connected in four groups which can be connected in series or in parallel. The temperatures of the active zone and outer surface are 1770 and 1000°C, respectively. The power ratings are 0.50--0.80 kW electric and 40 kW thermal, the maximum current (parallel connection) is 88 A, the neutron flux is  $10^{13}$  neut/cm<sup>2</sup> sec in the center of the active zone and  $7 \times 10^{12}$  on its boundary. The reactor has a negative temperature reactivity coefficient. The equipment has high inherent stability and requires no external regulator, and little change was observed in the thermocouple properties after 2500 hours of operation. Tests on the equipment parameters are continuing, and the results are being analyzed for use in future designs. Orig. art. has: 8 figures and 1 formula.

Card 2/3



KUKHARKIN, S. A.; SIMONOVA, R. G.

Felt

Using an all-metal errated band in the felt-fulling industry. Leg. prom., 12, No. 8, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952. Unclassified.

1. KUKHARSKIN, VINTERKHANEEM
  2. USSR (600)
  4. Comets - 1952
  7. Comet Harrington 1952e., Astron. tsir., no. 130, 1952.
9. Monthly List of Russian Accessions, Library of Congress, May 1953, Unclassified.

BABIKOV, Maksim Alekseyevich, prof.; KOMAROV, Nikita Semenovich;  
SERGEYEV, Aleksandr Sergeyevich; KUKHARKIN, Ye.P., dots.,  
retsenzent; KOGEN-DALIN, V.V., dots., kand. tekhn.nauk,  
red.; LARIONOV, G.Ye., tekhn. red.

[High-voltage engineering] Tekhnika vysokikh napriazhenii.  
Izd.3., perer. Moskva, Gosenergoizdat, 1963. 670 p.  
(MIRA 17:2)

AM4016861

BOOK EXPLOITATION

S/

Kukharkin, YEvgeniy Stepanovich; Sestroretskiy, Boris Vasil'yevich

Electric strength of waveguide devices (Elektricheskaya prochnost' volnovodnykh ustroystv) Moscow, "Vysshaya shkola," 63. 0451 p. illus., biblio. 3000 copies printed.

TOPIC TAGS: microwave discharge, microwave antenna, breakdown strength, dielectric strength, microwave discharge arc, supersonic aircraft radio reception, supersonic aircraft

PURPOSE AND COVERAGE: The book topics are the theory of discharges at microwave frequencies; equipment and procedures for determining the electric strength of antenna and waveguide devices; the effect of wavelength, off-duty cycle, pulse duration, discharge gap length, and pressure on the discharge voltage in air; and calculations of the discharge power of different waveguide devices. A procedure is proposed for designing waveguide filters for a specified operating

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power, and the conditions are given for the onset of thermal ionization and its effect on radio-wave propagation in objects flying within the atmosphere at supersonic speed. The book reviews systematically many articles in the Soviet and non-Soviet periodic press, and also work by the authors. It is intended for designers of waveguide apparatus and for scientific workers, engineers, instructors, and students interested in the foregoing problems. Chapters I, II, V, and VI were written by Ye. S. Kukharkin, Ch. IV by B. V. Sestroretskiy, and Ch. III is jointly written.

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Ch. II. Discharge voltage of air in a homogeneous field at microwave frequencies -- 53

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Ch. III. Discharge power of waveguide devices -- 95  
Ch. IV. Design of waveguide filters for a specified operating  
power -- 165  
Ch. V. Effect of Thermoionization produced during high-speed flight  
on the transmission and reception of radio waves -- 289  
Ch. VI. Equipment and procedure for experimentally determining the  
electric strength of antenna-waveguide devices -- 305  
Appendices -- 344  
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SUB CODE: EE, SP SUBMITTED: 27Feb63 NR REF SOV: 041

OTHER: 122 DATE ACQ: 10Dec63

Card 3/3

YUDIN, Petr Afanasyevich, prof., MEL'NIKOV, N. A., prof.  
Slobodcikov, prof.; DARYISKIV, Aleksandr Leonidovich,  
prof.; KUKHARENKO, Yevgeniy Stepanovich, prof.  
KHANISTALEVA, N. I., red.

[Theoretical principles of electrical engineering] Teoretičeskie principy elektrotehniki. Moscow, Vysshaya shkola,  
1966. 920 p. (USSR)  
(MIRA 1841)

DEREVSKIY, Aleksandr Iosifovich; KUKHARKIN, Yevgeniy Stepanovich;  
Prinimal uchastye IONKIN, P.A., prof.; BURLAK, M.F., red.

[Theoretical principles of electrical engineering] Teore-  
ticheskie osnovy elektrotekhniki. Moskva, Vysshiaia shkola.  
Pt.2. 1965. 282 p. (MIRA 18:10)

IONKIN, Petr Afanas'yevich; KURDYUKOV, Nikolay Nikolayevich;  
KUKHARKIN, Yevgeniy Stepanovich; KARAYEV, R.I., prof.,  
retsenzent; BEREZINA, Ye.P., red.

[Standard examples and problems on the theoretical prin-  
ciples of electrical engineering] Tipovye primery i za-  
dachi po teoreticheskim osnovam elektrotekhniki. Mo-  
skva, Vysshiaia shkola, 1965. 319 p. (MIRA 18:7)

IVSHIN, Pavel Yakovlevich; KUKHARKINA, N.M., retsenzent; MER, N.M.,  
retsenzent; KRISHTAL', L.I., red.; CHIRSKIY, G.M., red.;  
VASIL'YEVA, N.N., tekhn. red.

[Statistics of the locomotive depot; records and accounting]  
Statistika v lokomotivnom depo; uchet i otchetnost'. Mo-  
skva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soob-  
shcheniya, 1962. 111 p. (MIRA 15:3)  
(Railroads--Statistics) (Locomotives)

KUKHARKINA, S.A.; MEDVEDNIKOV, V.A.

New-weave castor of lightweight, semi-coarse wool. Tekst.prom. 16  
no.12:24-27 D<sup>o</sup>56.  
(Woolen and worsted manufacture)  
(MLRA 10:1)

USSR/Soil Science. Soil Biology

J-2

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 43808

Author : Kukharkov A.M.

Inst : Kharkov Agricultural Institute

Title : The Effect of Several Physico-Chemical and Biotic Conditions  
on the Distribution of Azotobacters in the Soil.

Orig Pub : Uch. zap. Kharkovsk. un-t, 1956, 72, 103-113

Abstract : The density of azotobacters in the soils of the experimental plots of Khar'kov Agricultural Institute in Rogan proved to be highest in the springtime, decreased in the summer, grew larger again in the fall. The author connects this with soil moisture changes, as welll as variations in the micro-flora accompanying the azotobacters. Grasses, summer wheat with an underplanting of grasses and sugar beets exerted a beneficial influence on the development of azotobacters. A direct relation was noted between the quantity of water soluble Ca in the soil and the azotobacters (analyzed on 6 June). A number of microorganism cultures which were extracted from

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USSR/Soil Science. Soil Biology

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Abs Jour : Ref Zhur - Biol., No 10, 1958, No 43808

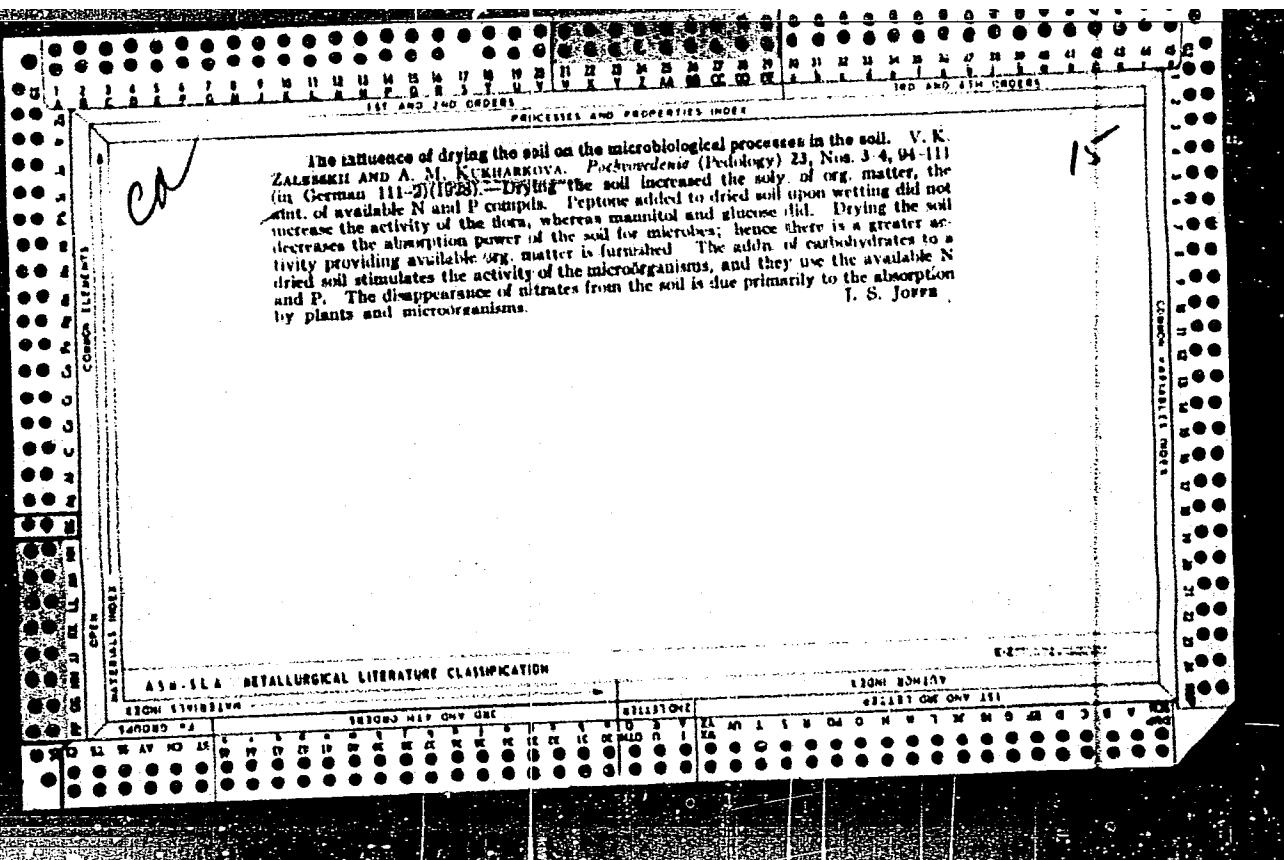
the test grounds and raised on MPA had an unfavorable effect on azotobacter development, although their antagonistic activity was weak. The density of azotobacters was higher in soils containing a smaller amount of antagonistic organisms. The bibliography lists 11 titles. --Ye.A. Krongauz

Card : 2/2

12

KUKHARKOV, N.N.

Publication of M.V.Lomonosov's works. Vop.ist.est.i tekhn.  
no.12:230 '62. (MIRA 15:4)  
(Lomonosov, Mikhail Vasil'evich, 1711-1765)



1. KUKHARKOVA, A.M.
2. USSR (600)
7. "The Effect of Vitamins upon the Reproduction of Azotobacter and its Fixation of Atmospheric Nitrogen", Uchenyye Zapiski Khar'k. Gos. Un-ta (Scientific Notes of the Khar'kov State University), Vol 32, Trudy Nauchno-Issl. In-ta Biologii (Works of the Science-Research Institute of Biology), Vol 13, 1950, pp 149-157.
9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified.

Kukharkova,

A. M.

The effect of culture conditions on the vitamin content of *Acetobacter* *chromococcus*. A. M. Kukharkova. Nauk.-Izdat. Inst. Rul. Nauk. 1955, No. 11, 145-147 (1955).

Referat. Zhur. Biol. 1955, No. 307. A study was made of the synthesis of biologically active vitamins in *Acetobacter chromococcus* cultured on Ashby agar under a variety of conditions. *Saccharomyces ludwigii* was used as the test organism because its proper growth requires pantothenic acid, inositol acids, and vitamin B<sub>1</sub>. The dry cells of *Acetobacter* or its alc. exts. assured the growth of *S. ludwigii* on Gattuk medium. The bacterial cells of a 5-day-old culture contained more biologically active vitamins favorable to the yeast proliferation than 2, 3, 6, 9, and 11-day-old cultures. Fe and Mo added to the Ashby medium stimulated the production of biologically active vitamins by *Acetobacter*. Not so pronounced was the effect of vitamin B<sub>1</sub>, but the effect of exts. of germs and sprouts of wheat and of peas was even greater. The vitamin synthesis by *Acetobacter* occurred easily under favorable conditions. The synthesized biologically active substances frequently permeated into the surrounding medium. *Acetobacter* grown in the presence of bound N ( $(\text{NH}_4)_2\text{SO}_4$ , peptone) contained less biologically active vitamins than *Acetobacter* which secured their N by biotin fixation.

B. S. Levine

KUKHARKOVÁ, A.M.

Soil micro-organisms and structure in grassland rotations. Uch.zap.  
KHGU 46:135-144 '53. (MIRA 11:11)

1. Kafedra fiziologii rasteniy i mikrobiologii Khar'kovskogo gosu-  
darstvennogo universiteta.  
(Soil micro-organisms) (Soil structure) (Rotation of crops)

KUKHARKOVA, A.M.

~~Effect of cultivation conditions on the vitamin content of Azotobacter chroococcum. Izv.zap.KHGU 46:145-154 '53. (MIRA 11:11)~~

1. Kafedra fiziologii rasteniy i mikrobiologii Khar'kovskogo gosudarstvennogo universiteta.  
(Azotobacter) (Vitamins)

KUKHARKOVA, I.

What should a veterinary and sanitary control be like.  
Mins.ind.SSSR 31 no.5:27-28 '60. (MIRA 13:9)  
(Meat inspection)

KUKHARKOVA, L.

Consultation. Mias. ind. SSSR 34 no.5:52 '63.  
(MIRA 16:11)  
1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy  
promyshlennosti.

1. KUKHARKOVA, L.
2. USSR (600)
4. Meat - Preservation
7. Conditions for processing, storing and selling perishable meat products, Mias.ind.  
SSSR. 24 no. 2, 1953.
9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

KUKHARKOVA, L.L.; TRUDOLYUBOVA, G.B.

Sanitary evaluation of canned meat containing cecal micro-organisms.  
Trudy VNIIM no.6:84-98 154. (MIRA 10<sup>4</sup>)  
(Meat, Canned--Bacteriology)

BOGDANOVA, Igubov' Ivanovna; KUKHARKOVA, L.I., spetsred.; RUSAKOV, V.N.,  
spetsred.; SLEVENOVA, N.L., red.; CHEBYSHEVA, Ye.A., tekhn. red.

[Microbiological control in meat plants] Mikrobiologicheskii kontrol'  
na miasokombinatakh. Moskva, Pishchepromizdat, 1958. 137 p.  
(Meat inspection) (MIRA 11:7)

BELEN'KIY, N.G., akademik; POZHARISKAYA, L.S., kand. biol. nauk; POLONSKAYA,  
L.B., kand. tekhn. nauk; TOMME, L.G., kand. sel'skokhozyaystvennykh  
nauk; KUKHARKOVA, L.L., starshiy nauchnyy sotrudnik.

New methods for utilizing the blood of slaughter-stock as feed.  
Zhivotnovodstvo 20 no.5:70-75 My '58. (MIRA 11:5)  
(Blood as food or medicine) (Meat industry--By-products)  
(Feeding and feeding stuffs)

BELEN'KIY, N.G., akademik; POZHARISKAYA, L.S., kand. biol. nauk; POLONSKAYA,  
L.B., kand. tekhn. nauk; TOMICHE, L.G., kand. zootekhn. nauk;  
KUKHARKOVA, L.L.

(Methods of preserving the blood of slaughter animals and using it  
for fattening swine. Dokl. Akad. sel'khoz. 23 no. 6:27-32 '58.  
(MIRA 11:?)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlennosti.  
(Blood--Collection and preservation)  
(Swine--Feeding and feeding stuffs)

KUKHARKOVA, L.

Book on the histology of meat and meat products ("Microscopy of meat and raw materials of animal origin" [in Czech] by R. Bohm and V. Pleva. Reviewed by L. Kukharkova). Mias. ind. SSSR 29 no.2:57 '58. (MIRA 11;5)  
(Meat) (Microscopy)  
(Bohm, R.) (Pleva, V.)

KUKHARKOVA, L.; RUSAKOV, V.

Place veterinary inspection under the economic councils. Mias.  
ind. SSSR 29 no.5:31 '58. (MIRA 11:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myashnoy promysh-  
lennosti (for Kukharkova). 2. Moskovskiy oblastnarkhoz (for  
Rusakov).

(Meat inspection)

RUBASHKINA, S.Sh., starshiy nauchnyy sotrudnik; KUKHARKOVA, L.L., starshiy  
nauchnyy sotrudnik; PEROVAYA, P.V., kand.veterinarnykh nauk

Effectiveness of the various preservatives used in processing  
blood for food products. Trudy VNIIMP no.9:75-79 '59.

(MIRA 13:8)

(Blood--Collection and preservation)  
(Blood as food or medicine)

KUKHANKOVA, L.L., starshiy nauchnyy sotrudnik

Veterinary and sanitary examination of the liver of slaughtered  
animals affected with melanosis. Trudy VNIIMP no.9:144-147  
'59.

(Meat inspection) (Liver--Diseases)

(MIRA 13:8)

KUKHARKOVA, L.L., starshiy nauchnyy sotrudnik; ADUTSKEVICH, V.A., kand.  
veterinarnykh nauk; BOYARSHINOV, P.K., kand.veterinarnykh nauk;  
PEROVA, P.V., kand.veterinarnykh nauk

Diagnostics, sterilization and utilization of abattoir products  
obtained from farm animals affected with listerellosis.

Trudy VNIIMP no.9:148-151 '59.

(MIRA 13:8)

(Cattle--Diseases and pests)

(Listerellosis)

(Meat inspection)

KUKHLIKOVA, L.; PEROVA, P.; IL'YASHEVSKO, M.

Method for the bacteriological inspection of sausage products,  
Mias.ind. SSSR 31 no.6:28-30 '60. (MIRA 13:12)

L. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promysh-  
lennosti.  
(Sausages--Bacteriology)

KUKHARKOVA, L. I., BOYARSHINOV, P. K., ADUTSKEVICH, V. A. and PETROVA, P. V.

"About the problem of sanitary estimation of meat during listeriosis."

Veterinariya Vol. 37, No. 3, 1960, p. 74

all-Union Sci.-Res. Inst. Meat Industry

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000927310001-8

KUKHARKOVA, L. L., ADUJSKEVICH, V. A., BOYARSHINOV, P. K. and PEROVA, P. V.

"Before- and after slaughter diagnostics of listeriosis in pigs and sheep."

Veterinariya, Vol. 37, No. 5, 1960, p. 61

All-Union Sci. Res Inst. Meat Industry

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CIA-RDP86-00513R000927310001-8"

KUKHARKOVA, L. L.,<sup>1</sup>, SHUR, I. V., YAKOVLEV, L. A.,<sup>2</sup>, FRYDLIN, E. M., PEROVA, P. V.,  
IL'YASHENKO, M. A.,<sup>3</sup>, KRASIL'NIKOV, R. I., FITINGOF, S. N.,<sup>4</sup>, TRUDOLYUBOVA, G. B.,  
RUSANOV, R. S., KONUSPAYEVA, U. S., MITROFANOV, V. N., and KAPETNAUMOVA, N. P.,<sup>5</sup>,  
(1 Director of the Laboratory of Microbiology and Veterinary Sanitary Inspection of  
VNIIIMP [All-Union Scientific Research Institute of the Meat Industry], (2 Professors),  
(3 Candidates of Veterinary Sciences), (4 Senior Scientific Workers), (5 Junior  
Scientific Workers).

"Sanitary Appraisal of Nutritive Value from Sheep Infected by Brucellosis."  
Veterinariya vol. 38., no. 11., November 1961., p. 60

SOKOLOV, A., prof.; KUKHARKOVA, I..

Processing of hogs in the meat plants of the Polish People's Republic.  
Mias.ind.SSSR 33 no.5:59-60 '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlennosti.  
(Poland—Pork industry)

KUKHARKOVA, L.L.; BOYARSHINOV, P.K.; ADUTSKEVICH, V.A.; PEROVA, P.V.

Hygienic evaluation of meat in listeriosis. Veterinariia 37 no.3:  
74-79 Mr '60. (MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myacnoy  
promyshlennosti.  
(Listeriosis) (Meat--Microbiology)

KUKHARKOVA, L.L., starshiy nauchnyy sotrudnik; BOYARSHINOV, P.K.,  
kand. veterinarnykh nauk; IL'YASHEVKO, M.A., kand. veterinarnykh  
nauk; STEFANOV, A.V.

Development of the method for the disinfection of leather and  
fur raw materials from animals affected by listeriosis.  
Trudy VNIIMP no.13:64-69 '62. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy  
promyshlennosti (for Kukharkova, Boyarshinov, Il'yashenko).
2. Starshiy bakteriolog Moskovskogo mesnogo kombinata (for  
Stefanov).

KUKHARKOVA, L. I.; LAVROVA, L. P.; FREYDLIN, Ye. M.; KASTRULINA, Z. N.; PERCOVA, P. V.;  
BUSHKOVA, L. A.

"Cover pickles microflora in smoked pork meats and bacon production."

report submitted for 10th European Mtg, Meat Res Workers, Rockilde, Denmark, 7-15  
Aug 1964.

KUKHARKOVA, L.L., starshiy nauchnyy sotrudnik; FREYDLIN, Ye.M., kand.veter.  
nauk; PEROVA, P.V.; IL'YASHENKO, M.A.; TRUDOLYUBOVA, G.B., mladshiy  
nauchnyy sotrudnik; PLOTNIKOV, V.I.; KRASIL'NIKOV, R.I., starshiy  
nauchnyy sotrudnik; FITINGOV, S.N., starshiy nauchnyy sotrudnik;  
RUSANOV, R.S., mladshiy nauchnyy sotrudnik; KONUSPAYEVA, U.S.,  
mladshiy nauchnyy sotrudnik; Prinimali uchastiye: YAKOVLEV, L.A.,  
prof.; MITROFANOV, V.N.

Sanitary evaluation of the meat of sheep affected with brucellosis.  
Trudy VNIIMP no.14:87-95 '62. (MIRA 16:8)

1. "Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy  
promyshlennosti (for Kukharkova, Freydlin, Perova, Il'yashenko,  
Trudolyubova, Plotnikov). 2. Kazakhskiy filial Vsesoyuznogo  
nauchno-issledovatel'skogo instituta myasnoy promyshlennosti  
(for Krasil'nikov, Fitingov, Rusanov, Konuspayeva).  
3. Saratovskiy zooveterinarnyy institut (for Yakovlev). 4. Saratovskaya  
oblastnaya veterinarnaya bakteriologicheskaya laboratoriya  
(for Mitrofanov).

(Meat inspection) (Brucellosis in sheep)

SHUR, I.V., prof.; YAKOVLEV, L.A., prof.; KUKHARKOVA, L.L.; FREYDLIN, Ye.M.,  
kand. veterin. nauk; PEROVA, P.V., kand. veterin. nauk; IL'YASHENKO,  
M.A., kand. veterin. nauk; KRASIL'NIKOV, R.I., starshiy nauchnyy  
sotrudnik; FITINGOF, S.N.; starshiy nauchnyy sotrudnik; TRUDOLYUBOVA,  
G.B., mls 'shiy nauchnyy sotrudnik; RUSANOV, R.S., mladshiy nauchnyy  
sotrudnik; KONUSPAYEVA, U.S., mladshiy nauchnyy sotrudnik;  
MITROFANOV, V.N., mladshiy nauchnyy sotrudnik; KAPERNAUMOVA, N.P.,  
mladshiy nauchnyy sotrudnik;

Sanitary evaluation of meat from sheep with brucellosis. Veterinariia 38 no.11:60-65 N '61  
(MIRA 18:1)

1. Rukovoditel' laboratorii mikrobiologii i veterinarno-sanitarnoy  
ekspertizy Vsesoyuznogo nauchno-issledovatel'skogo instituta myasnoy  
promyshlennosti (for Kukharkova).

AKHMEDOV, A.M., prof., doktor veter. nauk; GONCHAROV, G.D., doktor biol. nauk; DURASOV, V.I.; ZAGAYEVSKIY, I.S., prof., doktor veter. nauk; KUKHARKOVA, L.L.; BARMASH, A.I., kand. tekhn. nauk; POZHARISKAYA, L.S., kand. tekhn. nauk; LAPTEV, F.P.; LIBERMAN, S.M., kand. tekhn. nauk; PETROVSKIY, V.P., inzh.; MIRONOV, A.N., prof., doktor veter. nauk; MALYSHEV, K.B., kand. veter. nauk; NIKITIN, B.P., inzh.; POLYAKOV, A.A., prof., doktor veter. nauk; RUSAKOV, V.N.; TARSHIS, M.G., kand. veter. nauk; SHUR, I.V., prof., doktor veter. nauk; YARNYKH, A.M., red.

[Manual on veterinary and sanitary expertise and hygiene in the processing of animal products] Rukovodstvo po veterinarno-sanitarnoi ekspertizye i gигиене pererabotki zhivotnykh produktov. Izd.2., ispr. i dop. Moskva, Kolos, 1965. 425 p.  
(MIRA 18:6)

KUKHARKOVA, L.L., starshiy nauchnyy s'otrudnik; ADUTSKEVICH, V.A., kand.  
veterin. nauk; BOYARSHINOV, P.K., kand. veteran. nauk; PEROVA,  
P.V., kand. veteran. nauk; SHUR, I.V., prof., konsul'tant

Sanitary examination of meat and meat products from animals affected  
by listerellosis and its diagnosis. Trudy VNIIMP no.11:178-193 '62.  
(MIRA 18:2)

SHISHKINA, N.N., kand. tekhn. nauk; ZBANDUTO, L.L., inzh.; KHOKHLOVA,  
Z.V., inzh.; KUKHARKOVA, L.L., starshiy nauchnyy sotrudnik;  
IL'YASHENKO, M.A., kand. veterin.nauk

Investigating the physicochemical and bacteriological changes  
in packaged meat. Trudy VNIIMP no.12;71-62 '62. (MIRA 18:2)

KUKHARKOVA, L.L., starshiy nauchnyy sotrudnik; PEROVA, P.V., kand. veteran.  
nauk; IL'YASHENKO, M.A., kand. veteran. nauk; TRUDOLYUBOVA, G.B.,  
mladshiy nauchnyy sotrudnik

Microflora of uncooked smoked sausages. Trudy VNIIMP (MIRA 18:2)  
no.12;112-121 '62.

LAVROVA, L.P., kand. tekhn. nauk; KUKHARKOVA, L.L., starshiy nauchnyy sotrudnik; SOLOV'YEV, V.I., kand. khim. nauk; IL'YASHENKO, M.A., kand. veteran. nauk; KRYLOVA, V.V., starshiy nauchnyy sotrudnik; VOLKOVA, A.G., mladshiy nauchnyy sotrudnik; KUZNETSOVA, G.N., maldshiy nauchnyy sotrudnik; POLETAYEV, T.N., mladshiy nauchnyy sotrudnik

Intensification of technological processes in the production of hard smoked sausages. Trudy VNIIMP no.11:57-75 '62.  
(MIRA 18:2)

KUKHARKOVA, L.L., starshiy nauchnyy sotrudnik; LAVROVA, L.P., kand. tekhn. nauk; SOLOV'YEV, V.I., kand. khim. nauk; FREYDLIN, Ye.M., kand. veter. nauk; PEROVA, P.V., kand. veter. nauk; SADIKOVA, I.A., kand. biol. nauk; KRYLOVA, V.V., starshiy nauchnyy sotrudnik; BUSHKOVA, L.A., starshiy nauchnyy sotrudnik; RYNDINA, V.P., starshiy nauchnyy sotrudnik; TRUDOLYUBOVA, G.B., starshiy nauchnyy sotrudnik; KARGAL'TSEV, I.I., assistant; MIKHAYLOVA, A.Ye., mladshiy nauchnyy sotrudnik; KARPOVA, V.I., mladshiy nauchnyy sotrudnik; POLETAYEV, T.N., mladshiy nauchnyy sotrudnik; MERKULOVA, V.K., mladshiy nauchnyy sotrudnik

Directed use of microorganisms for the improvement of the quality of sausage products. Report No. 1. Trudy VNIIMP no.16:  
(MIRA 18:11)  
64-75 '64.

1. Kafedra tekhnologii Moskovskogo tekhnologicheskogo instituta myasnoy i molochnoy promyshlennosti (for Kargal'tsev).

KUKHARKOVA, L.L., starshiy nauchnyy sotrudnik; LAVROVA, L.P., kand.  
tekhn. nauk; SOLOV'YEV, V.I., kand. khim. nauk; FREYDLIN, Ye.M.,  
kand. veter. nauk; PEROVA, P.V., kand. veter. nauk; SADIKOVA,  
I.A., kand. biol. nauk; KRYLOVA, V.V., starshiy nauchnyy  
sotrudnik; BUSHKOVA, L.A., starshiy nauchnyy sotrudnik;  
RYNDINA, V.P., starshiy nauchnyy sotrudnik

Directed use of microorganisms for the improvement of the  
quality of sausage products. Report No. 2. Trudy VNIMP no.16:  
76-109 '64. (MIRA 18:11)

RUKHARSKAYA, YE.V.

Raman spectra of some aliphatic hydrocarbons. V. A.  
Kolesnik, E. V. KukharSKaya, and D. N. Andreev. Bull.  
Akad. Nauk SSSR, Div. Chem. Sci. 1953, 247-70 (Bull.  
Acad. N. SSSR, Div. Chem. Sci. 1953, 247-70 (Bull.  
translation).—See C.A. 47, 9710s. H. L. H. RR

KOLESOVA, V.A.; KUKHARSKAYA, Ye.V.; ANDREYEV, D.N.

Combination scattering spectra of some silanes. Izv. AN SSSR, Otd.khim.  
nauk. no.2:294-297 Mr-AP '53. (MLRA 6:5)

1. Institut khimii silikatov Akademii nauk SSSR.  
(Silanes) (Spectrum analysis)

Kukharskaya, Yu.

**Synthesis and properties of silicon-organic esters of propionic and isobutyric acids.** Yu. N. Andreev, B. N. Dolgov, and E. V. Kukharskaya. *Izvest. Akad. Nauk S.S.R. Otdel. Khim. Nauk* 1955, 528 (3); *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1955, 405-7 (P. gl. translation).—Adding chlorosilanes to a suspension of dry  $\text{RCO}_2\text{Na}$  in pete. ether and refluxing 8-12 hrs. gave the following propionic esters ( $\text{R} = \text{EtC(O)O}$ ; % yield, b.p.,  $\text{d}_{4}^{20}$ , and  $n_{D}^{20}$  shown):  $\text{Me}_2\text{SiR}$ , 61.5%;  $b_p$  83.5-1<sup>o</sup>, 1.0057, 1.4080;  $\text{Me}_3\text{SiR}$ , 50.0,  $b_p$  130<sup>o</sup>, 1.0939, 1.4140;  $\text{Et}_2\text{SiR}$ , 93.8,  $b_p$  83-5<sup>o</sup>, 0.8855, 1.4302;  $\text{Et}_3\text{SiR}$ , 15.0,  $b_p$  103.5-0.5<sup>o</sup>, 0.9890, 1.4193;  $\text{EtSiR}_2$ , 61.5,  $b_p$  119<sup>o</sup>, 1.0060, 1.4180. **Isobutyric esters** ( $\text{R} = \text{OCOCHMe}_2$ ):  $\text{Me}_2\text{SiR}$ , 47.3,  $b_p$  43.5-4<sup>o</sup>, 0.8601, 1.3950;  $\text{Me}_3\text{SiR}$ , 72.9,  $b_p$  86-5.5<sup>o</sup>, 0.9731, 1.4057;  $\text{Et}_2\text{SiR}$ , 20.3,  $b_p$  126-7<sup>o</sup>, 1.0223, 1.4090;  $\text{Et}_3\text{SiR}$ , 05.0,  $b_p$  88<sup>o</sup>, 0.8743, 1.4190;  $\text{Et}_2\text{SiR}_2$ , 53.2,  $b_p$  123-5<sup>o</sup>, 0.9538, 1.4190;  $\text{EtSiR}_3$ , 35.9,  $b_p$  129<sup>o</sup>, 1.0144, 1.4140. The esters are rapidly hydrolyzed by  $\text{H}_2\text{O}$ .

G. M. Kosolapoff

Inst. Chem. Silicates, AS USSR

Kokharskaya, E. V.

Silicorganic esters of organic silicon acids. B. N. Dolgov,  
 E. V. Kokharskaya and D. S. Andreev. (Silicate Chem.  
 Inst., Leningrad). *Zhur. Neorg. Khim.* 1961, 6, 1011.  
 Kharlamov, Nauk. 1957, 188-71.  
 $\text{CH}_3\text{CO}_2\text{Fe}$  (cf. Sovrem. chern. i tekhnika, 1960, 500, 100-500)  
 $\text{Et}_2\text{SiO}_2\text{Cl}$  (cf. Sovrem. chern. i tekhnika, 1960, 500, 100-500)  
 $\text{CO}_2\text{SiH}_3$ , bp 114°, n<sub>D</sub><sup>20</sup> 0.881  
 prepd. 59.5% ( $\text{Me}_3\text{SiH}_2\text{Cl}$ ), bp 114°, n<sub>D</sub><sup>20</sup> 0.881  
 1.0385, 76.1% ( $\text{Me}_3\text{SiH}_2\text{Cl}$ ), bp 114°, n<sub>D</sub><sup>20</sup> 0.881  
 1.0473, 68.8% ( $\text{Et}_2\text{SiO}_2\text{Cl}$ ), bp 114°, n<sub>D</sub><sup>20</sup> 0.881  
 0.9213, 1.4105; and 37.1% ( $\text{Et}_2\text{SiO}_2\text{CCl}_3$ ), bp 114°, n<sub>D</sub><sup>20</sup> 0.881  
 178-4°, 0.9281, 1.4440. To d. It sodium borate from 12.6  
 g. Na in 1 l. abs.  $\text{SO}_2$  was added 200 g.  $\text{Me}_3\text{SiCH}_2\text{Cl}$  and  
 the reaction mixture treated as described by Bonyhai, et al.,  
 $(\text{C.A.} 43, 5003)$ , rate < 3% ( $\text{Me}_3\text{SiCH}_2\text{CH}(\text{CO}_2\text{Et})_2$ ), bp  
 111°, 0.0081, 1.4188. This (111 g.) added dropwise in 1.6  
 hrs. to 255.4 g. KOH in 200 ml.  $\text{H}_2\text{O}$  at 0°, evapd., and  
 treated with concd. HCl gave 76.3%  $\text{Me}_3\text{SiCH}_2\text{CO}_2\text{Et}$ , bp  
 bp 138.5°, 0.9303, 1.4185, 711 (83.8 g.), added to 99 ml.  
 concd.  $\text{H}_2\text{SO}_4$  over 1 hr. and stirred 2 hr. gave after treat-  
 ment with  $\text{K}_2\text{CO}_3$  53.7% ( $\text{HO}_2\text{CCH}_2\text{CH}_2\text{SiH}_3\text{O}$ ), bp 164-6°,  
 1.0356, 1.4041. G. M. Kosolapoff

*KUKHARSKAYA, E.V.*  
DOIGOV, V.N.; KUKHARSKAYA, E.V.; ANDREYEV, D.N.

Organosilicon esters of organosilicon acids. Izv. AN SSSR, Otd.  
khim. nauk no.8:968-971 Ag '57. (MIRA 11:2)

1. Institut khimii silikatov AN SSSR,  
(S'lit' on organic compounds) (Esters)

KUKHARSKAYA, E. V.

B. B. Korshak, B. M. Frunze, E. V. Kukharskaya and L. I. Andreyeve, "The Synthesis of Polyamides from Silicon-containing Dicarbonic Acids."

Report presented at the Second All-Union Conference on the Chemistry and Practical Application of Silicon-Organic Compounds held in Leningrad from 25-27 September 1958.

Zhurnal prikladnoy khimii, 1959, № 1, pp 238-240 (USSR)

AUTHORS: Andreyev, D. N., Kukharekaya, E. V. SOV/62-58-6-8/37

TITLE: On Some Properties of the Bond Si-C<sub>aryl</sub> in Silicon-Organic Compounds Which, in the  $\gamma$ -Position, Contain a Carboxylic or Ester Group (O nekotorykh svoystvakh svyazi Si-C<sub>aryl</sub> v kremneorganicheskikh soyedineniyakh, soderzhashchikh v  $\gamma$ -polozhenii karboksil'nyu ili slozhnoscirnuyu gruppu)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 6, pp. 702-705 (USSR)

ABSTRACT: In the introduction the authors discuss the properties of trimethyl propionic acid, and in this connection the investigations carried out by Sommar (Ref 2) and Dolgov (Ref 3). They then discuss the possibility of synthetizing dibasic organic silicon compounds (with siloxan bond) by the hydrolytic cleavage of the bond Si-C<sub>aryl</sub>. In this way the following compounds were synthetized: diethyl-4,6-dimethyl-4,6-diethyl-4,6-disila-5-oxonandicarboxylic acid. The presence of 2 phenyl radicals in malonate connected by a silicon atom considerably increases the stability of this compound. The

Card 1/2

On Some Properties of the Bond Si-C<sub>aryl</sub> in  
Silicon-Organic Compounds Which, in the  $\gamma$ -Position,  
Contain a Carboxylic or Ester Group

SOV/62-58-6-8/37

methyldiphenylsilylpropionic acid separates benzene after  
condensation (200°). Besides, silicon-organic ester of  
silicon-organic acid is formed.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of  
the Chemistry of Silicates, AS USSR)

SUBMITTED: December 10, 1956

1. Silicon compounds (Organic)---Properties
2. Silicon compounds (Organic)---Synthesis
3. Molecular association
4. Propionic acid--Properties
5. Carboxylic acids---Synthesis
6. Phenyl radicals--Chemical effects

Card 2/2

5(3)

AUTHORS: Kukharskaya, E. V., Andreyev, D. N., Kolesova, V. A. SOV/62-58-11-16/26

TITLE: On the Interaction of Trimethylsilylmethyl Magnesium Chloride With Esters (O vzaimodeystvii trimetilsililmetilmagniykhlorida so slozhnymi efirami)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 11, pp 1372-1375 (USSR)

ABSTRACT: In the present paper the authors investigated the interaction of trimethylsilylmethyl magnesium chloride with ethyl acetate, ethyl-n-butyrate, and ethyl isobutyrate. It was found that the reaction with the two mentioned first takes place normally in the direction of the formation of tertiary alcohols. It is, however, also accompanied by a  $\beta$ -decay, by a cleaving off of a radical  $(CH_3)_3Si^-$  from the newly formed tertiary alcohol due to the rupture of the Si-C binding. This fact, however, was not surprising. A number of scientists had observed already earlier that in the case of organosilicic  $\beta$ -alcohols (Refs 3 and 6) as well as in the case of  $\beta$ -acids (Refs 3, 5), of ketones (Ref 4), and of esters (Ref 7) a rupture of Si-O bindings takes place under the action of electrophilic

Card 1/2

On the Interaction of Trimethylsilylmethyl Magnesium Chloride With Esters SOV/62-58-11-16/26

and nucleophilic agents. In the case of an experiment with ethyl isobutyrate tertiary alcohol or olefin could not be separated. The branched structure of the acid apparently represented considerable steric hinderances which obstructed the course of the reaction. If organosilicic alcohols containing a hydroxyl group at the  $\beta$ -carbon atom are dehydrated unsaturated silicon carbides with a double bond in the  $\beta$ -position form. There are 10 references, 4 of which are Soviet.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences, USSR)

SUBMITTED: March 20, 1957

Card 2/2

5(3)

AUTHORS: Andreyev, D.N., Kukharskaya, E.V. SOV/62-58-11-23/26

TITLE: Preparation of Organo-Silicon Ketones by Dry Distillation of Salts of Organo-Silicic Acids (Polucheniye kremneorganicheskikh ketonov sukhoy peregonkoy soley kremneorganicheskikh kislot)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 11, pp 1397 - 1398 (USSR)

ABSTRACT: In this short paper the authors reported on the condensation of salts of organic acids. Formerly, this reaction was not used for the preparation of organo-silicon ketones. Calcium salts of 2 acids, the trimethyl-silyl propionic acid (I) and the methyl-diethyl-silyl propionic acid (II), were condensed. It has been ascertained that this reaction produces ketones with symmetric structure, if salts of organo-silicic acids are used. From the condensation of a mixture of salts of organo-silicic and organic acids ketones of asymmetric structure are obtained. As a result of the investigation carried out it has been ascertained that during this reaction  $\gamma$ -organo-silicic acids show a similar behaviour as the organic ones and that in the distillation of their calcium salts they develop ketones in an equally high yield.

Card 1/2

Preparation of Organo-Silicon Ketones by Dry Distillation SOV/62-58-11-23/26  
of Salts of Organo-Silicic Acids

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR  
(Institute of Silicate Chemistry, Academy of Sciences, USSR)

SUBMITTED: May 13, 1958

Card 2/2

AUTHORS: Korshak, V. V., Frunze, P. M., SOV/79-28-7-62/64  
Andreyev, D. N., Zukharskaya, E. V.

TITLE: Letter to the Editor (Pis'mo v redaktsiyu). On the Properties  
of Polyamides With Siloxane Groupings (O svoystvakh poliamidov  
s siloksanovymi gruppami)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 7,  
pp. 1997 - 1998 (USSR)

ABSTRACT: The general interest prevailing in organosilicon compounds  
caused the authors to deal with the problem of whether the  
siloxane groupings in the chain of the initial dicarboxylic  
acid could exert an influence on the properties of the poly-  
amides. For this purpose they synthesized polyamides from three  
dicarboxylic acids of the structure  
 $\text{HOOC-(CH}_2\text{)}_2\text{-Si(R}_1\text{R}_2\text{)-O-Si(R}_1\text{R}_2\text{)-(CH}_2\text{)}_2\text{-COOH}$ , where 1)  $\text{R}_1=\text{R}_2=\text{CH}_3$ ;  
2)  $\text{R}_1=\text{R}_2=\text{C}_2\text{H}_5$ , 3)  $\text{R}_1=\text{CH}_3$ ,  $\text{R}_2=\text{C}_2\text{H}_5$ . From these acids polyamides were  
obtained by polycondensation with aliphatic and aromatic diamines,  
and from the mixtures of these acids as well as from the adipinic

Card 1/3

Letter to the Editor. On the Properties of Poly-amides With Siloxane Groupings

SOV/79-23-7-62/64

acid with hexamethylene diamine mixed polyamides were produced. It turned out that the introduction of siloxane compounds leads to the formation of polymers. They are of a rubber-like nature and have low melting points as compared to those produced from azelaic acid, which fact obviously depends on the influence of the siloxane grouping as well as on the presence of the side substituents at the silicon atom; also the lower melting point and other properties in the substitution of the methyl- by the ethylradical at the silicon atom tend to show this dependence.

ASSOCIATION: Institut elementarnoorganicheskikh soyedineniy Akademii nauk SSSR i Institut khimii silikatov Akademii nauk SSSR (Institute of Elemental-organic Compounds, AS USSR, and Institute of the Chemistry of Silicates, AS USSR)

SUBMITTED: April 10, 1958

Card 2/3

FRUNZE, T.M.; KORSHAK, V.V.; ANDREYEV, D.N.; KUKHARSKAYA, E.V.

Heterochain polyamides. Part 16: Polyamides containing siloxane  
groups in the main chain. Vysokom. soed. 1 no.4:489-494  
Ap '59. (MIRA 12:9)

1. Institut elementoorganicheskikh soyedineniy An SSSR, i Institut  
khimii silikatov AN SSSR.  
(Amides)

DOLGOV, B.N. [deceased]; KUKHARSKAYA, E.V.; ANDREIEV, D.N.

Organosilicon esters of acrylic and methacrylic acid. Part 2:  
Polymerization and properties of the polymers. Vysokom. soed. 2  
no.10:1463-1465 O '60.  
(MIRA 13:9).

1. Institut khimii silitkatorov AN SSSR.  
(Acrylic acid) (Methacrylic acid) (Polymers)

82683

S/079/60/030/008/008/008  
B004/B064

53700

AUTHORS:

Andreyev, D. N., Kukharskaya, E. V.

TITLE:

Organosilicon Esters of Acrylic and Methacrylic Acid.  
I. The Synthesis of Monomers

PERIODICAL:

Zhurnal obshchey khimii, 1960, Vol. 30, No. 8,  
pp. 2782 - 2784

TEXT: The organosilicon esters of acrylic and methacrylic acid were synthesized according to a procedure already described in a previous paper (Ref. 6) concerning the production of organosilicon esters of propionic and isobutyric acid;  $R_{4-x}SiCl_x + xMOCO(R')-CH_2 \rightarrow R_{4-x}Si[OCO(R')-CH_2]_x + xMCl$ , ( $R = CH_3$  or  $C_2H_5$ ,  $R' = H$  or  $CH_3$ ,  $M =$  alkaline or alkaline-earth metal). The yields were 30-70%. Inhibitors (hydroquinone, picric acid, etc.) had to be added to the reaction mixture since the esters polymerize easily. The monomers with three acryl- or methacryl radicals could be isolated only by freezing at  $-50$  to  $-80^{\circ}C$ . The reaction with the free acids gave lower yields. The

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82683

Organosilicon Esters of Acrylic- and Methacrylic Acid. I. The Synthesis of Monomers

S/079/60/030/008/008/008  
B004/B064

esters are colorless liquids or crystalline substances with low melting point. They hydrolyze readily. The silicon content was determined by mineralizing with a mixture of concentrated sulfuric and nitric acid, the molecular weight cryoscopically in benzene, the ester numbers by saponification with KOH in diethylene glycol. Synthesis was carried out of: trimethyl silyl acrylate, dimethyl silyl diacrylate, methyl silyl acrylate, as well as the corresponding ethyl compounds and methacrylates. A table gives the physical and analytical data. There are 1 table and 6 references: 3 Soviet, 2 US, and 1 British.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences USSR) IX

SUBMITTED: July 29, 1959

Card 2/2

83557

S/020/60/134/001/009/021  
B016/B067

5.3700C also 2209, 2109

AUTHORS: Andreyev, D. N., Kukharskaya, E. V.

TITLE: Condensation of Tetraalkyl Silanes in a Silent High-voltage  
Discharge of Sonic FrequencyPERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 1,  
pp. 89-92

TEXT: The authors studied trimethyl-ethyl- and dimethyl-diethyl silane under the conditions mentioned in the title (similar to those mentioned in Ref. 4). A mixture of the vapor of these substances with H<sub>2</sub> was passed through the zone of silent discharge at 6.5 - 6.8 kw and 4,000 cps. Among the reaction products of trimethyl-ethyl silane the authors identified the following compounds: gaseous compounds: ethylene and acetylene; liquid compounds: tetramethyl silane (I), hexamethyl-disil ethane (II), 3,3,5,5-tetramethyl-3,5-disilahexane (III), and 3,3,4,5,5-pentamethyl-3,5-disilahexane (IV). Furthermore, silicon hydrocarbons with an empirical formula C<sub>12</sub>H<sub>32</sub>Si<sub>3</sub> (V) were detected in higher-boiling products. They formed an X

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Condensation of Tetraalkyl Silanes in a Silent  
High-voltage Discharge of Sonic Frequency

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B016/B067

isomeric mixture difficult to separate. The high-molecular polymers with a boiling point >220°C had an average molecular weight of 1690, and corresponded to the composition  $(C_3H_8Si)_x$ . The ratio C/Si in the condensation products was considerably lower than in the initial  $(CH_3)_3SiC_2H_5$ ; it decreased monotonously from 5 : 1 to 3.8 : 1. The authors conclude therefore that the polycondensation process which they succeeded in bringing about is no simple dehydrogenating condensation by separation of the C-H bonds but that it is much more complicated due to the rupture either of the Si-CH<sub>3</sub>- or the Si-C<sub>2</sub>H<sub>5</sub> bonds. The authors proved that the

resistance of the C-C bonds in the ethyl radical to dissociation is sufficiently high so that they are not subject to ruptures worth mentioning in the experiments described here. The authors regard the dissociation of the Si-C bonds as the primary effect under the action of discharge. Further transformations of the methyl- and ethyl radicals lead to the formation of C<sub>2</sub>H<sub>2</sub>, C<sub>2</sub>H<sub>4</sub>, and H<sup>+</sup>. The lack of compounds with a Si-Si-bond in the condensate suggests that no recombination takes place among the organicsilicon radicals. A. A. Balandin, Ya. G. Eydu<sup>s</sup>, and N. G. Zalogin

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Condensation of Tetraalkyl Silanes in a Silent High-voltage Discharge of Sonic Frequency S/020/60/134/001/009/021  
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(Ref. 8) had proved earlier that chemical reactions of hydrocarbons under electric discharges may take place as a result of chain mechanism. The primarily formed H° and CH<sub>x</sub> may lead to the formation of secondary radicals (reactions (3), (4), and (5)). The recombination among these secondary radicals and with the primarily formed radicals leads to the formation of the simplest condensation products: C<sub>8</sub>H<sub>22</sub>Si<sub>2</sub> and C<sub>9</sub>H<sub>24</sub>Si<sub>2</sub>, e.g. II, III, and IV. From the large amount of IV, the authors conclude that reaction 5 predominates over reactions 3 and 4. They did not yet succeed in isolating individual compounds from the condensate of dimethyl-diethyl silane. The continuous decrease of the C/Si ratio (from 6 : 1 to 4.5 : 1 for high-molecular polymers) was also characteristic of the compounds contained therein. In conclusion, the authors state that polymeric hydrogen silicides may be produced by means of the polycondensation reaction discussed here in a single stage (yield 40%), in the main chain of which Si- and C-atoms alternate. The analyses were made under the supervision of Yu. N. Platonov. There are 12 references: 10 Soviet, 1 US, and 1 Japanese.

X

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83557

Condensation of Tetraalkyl Silanes in a Silent  
High-voltage Discharge of Sonic Frequency

S/020/60/134/001/009/021  
B016/B067

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR  
(Institute of Silicate Chemistry of the Academy of Sciences,  
USSR)

X

PRESENTED: April 26, 1960, by A. A. Balandin, Academician

SUBMITTED: April 26, 1960

Card #/a

84687

15.8114

S/020/60/134/004/011/023  
B016/B060

AUTHORS: Andreyev, D. N. and Kukharskaya, E. V.

TITLE: Condensation of Hexamethyl Disiloxane in a High-voltage Dark  
Discharge of Sonic Frequency

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 4,  
pp. 817 - 820

TEXT: The various ways of producing organosilicon compounds with alternating silicor hydrocarbon links (-Si-(CH<sub>2</sub>)<sub>n</sub>-Si-) and siloxane links (-Si-O-Si-) are inadequate in several respects. In view of this fact, the authors thought of bringing about a condensation of hexamethyl disiloxane by means of a single passage through the zone of electric discharge. Since the compounds used in the process remain in this zone for only a short time, secondary processes were expected to be eliminated to a large extent. The discharge tube was fed with a current of 4000 periods per sec. The procedure applied by the authors ensured good yields of low-molecular condensation products: voltage 50 kv, throughput 8 - 9 ml/h. A passage of

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Condensation of Hexamethyl Disiloxane in a  
High-voltage Dark Discharge of Sonic Frequency S/020/60/134/004/011/023  
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570 g cf hexamethyl disiloxane yielded 51% of liquid products. This condensate chiefly consisted (60 ~ 70%) of compounds containing 4 ~ 6 Si atoms in the molecule. About 10% consisted of more readily boiling substances (with 2 ~ 3 Si atoms in the molecule), and 20 ~ 25% fell to high-boiling polymers. Fractional distillation of the condensate gave the following compounds: I. octamethyl trisiloxane; II. 2,2,4,4,6,6,8,8-octamethyl-  
-2,4,6,8-tetrasila-3,7-dioxanonane; III. 2,2,4,4,7,7,9,9-octamethyl-2,4,7,9-  
-tetrasila-3,8-dioxadecane; IV. 2,2,4,4,6,6,8,8,10,10,12,12-dodecamethyl-  
-2,4,6,8,10,12-hexasila-3,7,11-trioxatridecane and, finally, a mixture of high-molecular polymers V, whose average composition was found to be  $C_{86}H_{242}O_{17}Si_{34}$ . The large quantities of intermediate fractions that were additionally contained in the condensate, consisted of difficultly separable mixtures comprising various polymers. The authors try to explain the processes involved by basing their assumptions on the fact that the acetylene found in the gases was certainly formed by cleavage of the Si-CH<sub>3</sub> bonds, and on the structure of the resulting compounds. The polymers are believed to result from a recombination of various free radicals. Higher-molecular polymers are formed either by the splitting of hydrogen atoms from

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Condensation of Hexamethyl Disiloxane in a S/020/60/134/004/011/023  
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lower-molecular polymers during interaction with H or CH<sub>3</sub>, or due to the cleavage of individual bonds in low-molecular polymers under the direct action of electric discharge. The resulting new radicals are recombined to form higher-molecular compounds. The presence of octamethyl trisiloxane in the reaction products gives evidence of a partial cleavage of the Si-O bonds. Octamethyl trisiloxane is probably the product of a recombination of two radicals (see Scheme (I)). The polycondensation carried out by the authors is accompanied by a partial but moderate demethylation (C/Si = 2.5 - 2.7, as against the hexamethyl disiloxane employed, where C/Si = 3). The method recommended here may be also used to condense other organo-siloxanes. There are 1 figure and 14 references: 7 Soviet, 5 US, and 1 Japanese.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR ( Institute of Silicate Chemistry of the Academy of Sciences USSR)

PRESENTED: May 4, 1960, by A. V. Topchiyev, Academician

SUBMITTED: May 4, 1960

Card 3/3

y.m  
S/0'9/62/032/004/008/010  
D287/D301

(S) 810

AUTHORS: Andreyev, D.N., and Kukharskaya, E.V.

TITLE: Interaction of organomagnesium complexes with organosilicon esters

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 4, 1962, 1352-1353,

TEXT: The present work was carried out because of the absence of information on the interaction between organosilicon esters and Grignard reagents, especially between compounds of the formula RMgX with alkyl acyloxysilanes ( $R^nSi(OCOR')$ )<sub>4-n</sub> where n = 1-3. The above compounds were found to form tertiary alcohols on reaction with  $C_2H_5MgBr$  as proved for trimethylsilyl propionate (I) and diethylsilyl dipropionate (II). Both compounds were synthesized in the usual way. In the first case 68 g of compound I was added to the Grignard reagent; the yield of 3-ethyl-3-pentanol was 32.9 %. This compound could be dehydrated to 3-ethyl-2-pentene by heating with anhydrous  $CuSO_4$ . In the second experiment 84 g of compound II was added to

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Interaction of organomagnesium ...

S/079/62/032/004/008/010  
D287/D301

the Grignard reagent; the alcohol was obtained with 42.5 % yield. Physical constants of the synthesized compounds are given and compared with literature data. There are 3 non-Soviet-bloc references: The references to the English-language publications read as follows: A.A. Morton and J.R. Stevens, J. Am. Chem. Soc., v. 53, 1931, 2244; G. Egloff, Physical Constants of Hydrocarbons, v. 1, 1939, 207; M. Etienne, C.T., 235, 967, 1952.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute for Silicate Chemistry of the Academy of Sciences of the USSR)

SUBMITTED: December 22, 1961

Card 2/2

S/079/62/032/004/009/010  
D287/D301

(1170

AUTHORS: Andreyev, D.N., and Kukharskaya, E.V.

TITLE: Organosilicon diethers and diesters of organosilicon acids

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 4, 1962, 1353-1354

TEXT: The authors found that the title compounds can be readily prepared by condensing the K or Na salts of  $\gamma$ -organosilicon acids with  $R_nSiCl_{4-n}$ ; mono- and dibasic  $\gamma$ -organosilicon acids enter into this reaction. The condensation reaction was carried out by heating the components in hydrocarbon solvents.  $[(CH_3)_3SiCH_2CH_2COO]_2Si(CH_3)_2$  (yield 59 %) and  $[(CH_3)_3SiOCOCH_2CH_2Si(CH_3)_2]_2O$  (yield: 36 %) were prepared by this method. Physical constants of the 2 compounds are given. There are 2 references: 1 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: A.G. Brook, J. Am. Chem. Soc., v. 77, 1955, 4827.

Card 1/2

Organosilicon diethers and ...

S/079/62/032/004/009/010  
D287/D301

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute for Silicate Chemistry of the AS USSR)

SUBMITTED: December 22, 1961

Card 2/2

ACCESSION NR: AP3000130

S/0062/63/000/005/0932/0934

AUTHOR: Skorik, Yu. I.; Gileva, K. G.; Kukharakaya, E. V.; Fedoseyev, A. D.

TITLE: Increasing the number of surface triple-bond Si single-bond OH groups in lamellar silicate

SOURCE: AN SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 5, 1963, 932-934

TOPIC TAGS: chrysotile, serpentine asbestos, acid hydroxyl groups, kaolin, ultrasound irradiation

ABSTRACT: The surface of natural chrysotile (serpentine asbestos) contains a significant amount of acid hydroxyl groups (approximately 1.3%) bound to the Si atoms. The number of -OH groups can be increased by pulverizing the silicate ultrasonically in an aqueous medium (about 2% -OH in 1/2 hour). The method of analysis for free H atom which was proposed by Terent'yev and Kireyeva (Izv. AN SSSR, Otd. khim. n. 1951, 172) was used for the quantitative determination of the triple-bond Si single-bond OH group on the surface of the silicate. The -OH in kaolin was similarly increased by ultrasound irradiation from about 0.6 to 1.8%. Orig. art. has: 1 table.

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ACCESSION NR: AP3000130

ASSOCIATION: Institut khimii silikatov im. I. V. Gribenashchikova Akademii nauk  
SSSR (Institute of Silicate Chemistry, Academy of Sciences SSSR)

SUBMITTED: 1 Dec 62

DATE ACQ: 12 Jun 63

ENCL: 00

SUB CODE: CH

NO REP SOV: 003

OTHER: 008

Card 2/2

KUKHAPSKAYA, Y. V.; FEDOSEYEV, A. D.

"Organic derivates of kaolin."

Report submitted for the International Clay Conference, Stockholm,  
Sweden, 12-16 Aug 63.

SKORIK, Yu.I.; GILEVA, K.G.; KUKHARSKAYA, E.V.; FEDOSEYEV, A.D.

Increase in the number of surface groups  $\equiv Si - OH$  in laminated silicates. Izv.AN SSSR Otd.khim.nauk no.5:932-934 My '63.  
(MIRA 16:8)

1. Institut khimii silikatov im. I.V.Grebenshchikova AN SSSR.  
(Silicates) (Hydroxyl group)

KUKHARSKAYA, E.V.; FEDOSEYEV, A.D.

Organic derivatives of silicates with laminated structure.  
Usp.khim. 32 no.9:1113-1123 S '63. (MIRA 16:9)

1. Institut khimii silikatov AN SSSR.  
(Silicates) (Silicon organic compounds)

ANDREYEV, D.N.; KUKHARSKAYA, E.V.

Condensation of silicon tetrachloride in silent discharges.  
Zhur. prikl. khim. 36 no.10:2309-2311 O '63.

(MIRA 17:1)

1. Institut khimii silikatov AN SSSR.

KUKHARSKAYA, E.V.; SKORIK, Yu.I.; BOYKO, N.S.

Organic derivatives of kaolin. Dokl. AN SSSR 148 no. 2:352-355  
Ja '63.

1. Institut khimii silikatov AN SSSR. Predstavлено академиком  
I.V. Tananayevym.

(Kaolin)

KUKHARSKAYA, E. V.; SKORIK, Yu.I.

Cleavage of organosiloxane with thionyl chloride during  
ultraviolet irradiation. Zhur. ob. Khim. 34 no.6:2092-2093

Je '64. (MIRA 17:7)

1. Institut khimii silikatov imeni I. V. Grebenschchikova AN SSSR.

L 19699-65 E/T(m)/EPF(c)/DWP(j)/ENP(i)  
ASD(p)-3 RM

Pc-4/Pr-4 AEDC(e)/ASE(f)-3/ASD(u)-3/

ACCESSION NR: AF4049487

S/0020/64/159/002/0369/0372

AUTHOR: Kukharskaya, E. V.; Skorik

Yu. I.

TITLE: Effect of thionyl chloride on the siloxane bond in ultrasound

SOURCE: AN SSSR. Doklady, v. 159, no. 2, 1964, 369-372

TOPIC TAGS: thionyl chloride, chlorination, ultrasound, cavitation, organosiloxane, siloxane bond rupture, hexamethyldisiloxane, hexaethylsiloxane, chlorotriethylsilane, chlorotrimethylsilane, chrysotile asbestos

ABSTRACT: Reactions of  $\text{SOCl}_2$  with hexamethylsiloxane, hexaethylsiloxane, and chrysotile asbestos were studied in a 20-kc ultrasonic field. These reactions were found to be analogous to reactions due to UV irradiation. Organosiloxane -  $\text{SOCl}_2$  mixtures (2:1 molar ratio) yielded, after 2 hr of ultrasound treatment, 17.5% chlorotrimethylsilane and 2% chloroethylsilane, respectively. The reaction with chrysotile asbestos (during 1 hr) resulted in an increase of 0.4% Cl. These reactions show that it is possible to effect rupture of the siloxane and silicates without the use

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ACCESSION NR: AP4049487

of a catalyst. Calculations of bond-rupture energies for Si—O and Si—Cl indicate that it is a predominantly homolytic process, although the parallel formation of ions is not excluded. Ultrasonic cavitation in  $\text{SOCl}_2$ -organosiloxane mixtures favors the gaseous-phase interaction of reagents with the activation of molecules in cavitation bubbles, leading to the rupture of siloxane bonds in  $\text{R}_3\text{SiOSiR}_3$  molecules by Cl radicals. The gaseous phase reactions are confirmed by the low yield of chlorotriethylsilane from the interaction of  $\text{SOCl}_2$  with hexaethylcyclotriphosphazene (b.p. 231°C). The chrysotile— $\text{SOCl}_2$  reaction reveals an ultrasonic-cavitation activation mechanism at the interphase, leading to a point deformation on the surface of the silicate crystal. The activation is due to a shock wave ensuing from the bursting of a cavitation bubble. Mechanical deformations result in the rupture of chemical bonds ( $\equiv\text{Si}—\text{O}—\text{Si}\equiv$ , or  $\text{Si}—\text{O}—\text{Mg}—$ ) yielding radicals and ions. Chlorine atoms combine there with the surface ( $\equiv\text{SiCl}$ ). Chlorination of asbestos with  $\text{SOCl}_2$  in an ultrasonic field is much higher in 1 hr than the photochemical chlorination during 16 hr, which fact indicates that mechanical deformations on the crystal surface are the determining factor in the process. Chlorination of

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